Performance guaranteed

OTX2 Monoclonal Antibody (1H12C4B5)

Catalog Number **MA5-15854**

Product data sheet

Details

Size	100 µL
Host/Isotope	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	1H12C4B5
Immunogen	Purified recombinant fragment of human OTX2 expressed in E. Coli.
Conjugate	Unconjugated
Form	Liquid
Concentration	Conc. Not Determined
Storage buffer	ascites
Contains	0.03% sodium azide
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

Species Reactivity

Species reactivity	Human, Mouse, Rat
Published species	Human, Mouse, Not Applicable

Tested Applications	Dilution *
ELISA (ELISA)	1:10,000
Flow Cytometry (Flow)	1:200-1:400
Immunohistochemistry (Paraffin) (IHC (P))	1:200-1:1,000
Western Blot (WB)	1:500-1:2,000
Immunocytochemistry (ICC/IF)	1:200-1:1,000

Published Applications

Immunohistochemistry (IHC)	See 2 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

MA5-15854 targets OTX2 in indirect ELISA, FACS, IF, IHC, and WB applications and shows reactivity with Human samples. The MA5-15854 immunogen is purified recombinant fragment of human OTX2 expressed in E. Coli. . MA5-15854 detects OTX2 which has a predicted molecular weight of approximately 32kDa.

Background/Target Information

OTX2 is a 289 amino acid containing protein encoding a member of the bicoid sub-family of homeodomain-containing transcription factors. It has two known alternative splice variants with distinct isoforms though presence of other isoforms cannot be excluded. The protein is an early marker of endodermal differentiation of embryonic stem cells and may play a role in the development of the brain and the sensory organs. The protein may bind to BCD target sequence (BTS): 5-'TCTAATCCC-3'. Defects in OTX2 are the cause of microphthalmia syndromic type 5 (MCOPS5).

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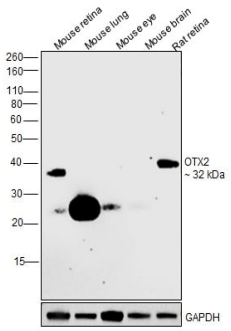
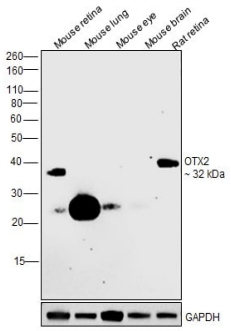
Product Images For OTX2 Monoclonal Antibody (1H12C4B5)



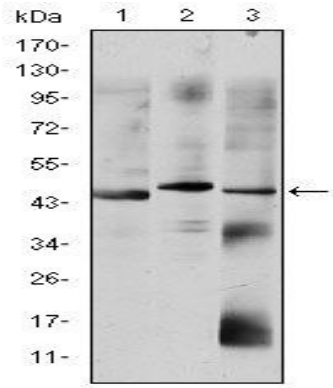
OTX2 Antibody (MA5-15854)

Antibody specificity was demonstrated by detection of differential basal expression of the target across tissue tested owing to their inherent genetic constitution. Relative expression of OTX2 was observed in Mouse retina in comparison to Mouse Brain, Mouse Eye and Mouse Lung using Anti-OOTX2 Monoclonal Antibody (1H12C4B5) (Product # MA5-15854) in Western Blot. {RE}



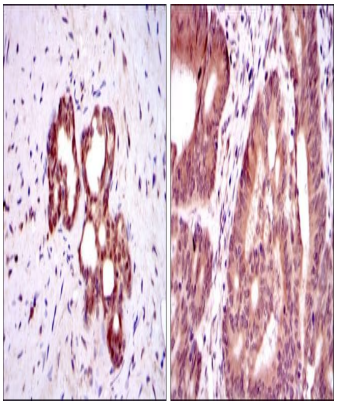
OTX2 Antibody (MA5-15854) in WB

Western blot was performed using Anti-OTX2 Monoclonal Antibody (1H12C4B5) (Product # MA5-15854) and a 32 kDa band corresponding to OTX2 was observed in mouse retina and rat retina as compared to other tissues. A band at ~25kDa corresponding to circulating tissue IgG was observed in the Mouse tissue lysates. Tissue extracts (30 µg lysate) of Mouse retina (Lane 1), Mouse lung (Lane 2), Mouse eye (Lane 3) Mouse brain (Lane 4) and Rat retina (Lane 5) were electrophoresed using Novex® NuPAGE® 12 % Bis-Tris gel (Product # NP0342BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1000 dilution) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution)using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



OTX2 Antibody (MA5-15854) in WB

Western blot analysis of OTX2 using OTX2 monoclonal antibody (Product # MA5-15854) in HepG2 (1), Jurkat (2), and NTERA-2 (3) cell lysate.



OTX2 Antibody (MA5-15854) in IHC (P)

Immunohistochemical analysis of paraffin-embedded prostate tissues (left) and colon cancer tissues (right) using OTX2 monoclonal antibody (Product # MA5-15854) followed with DAB staining.

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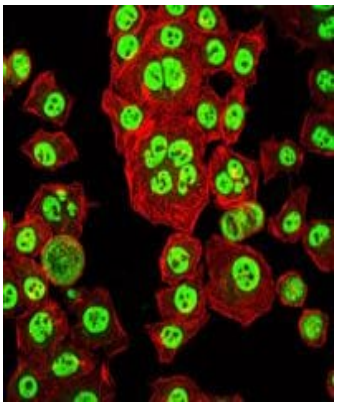
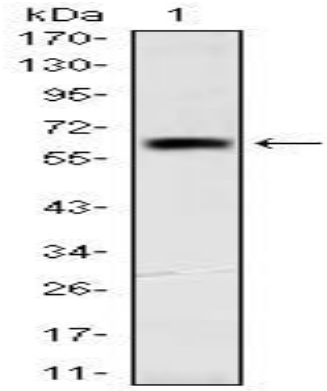


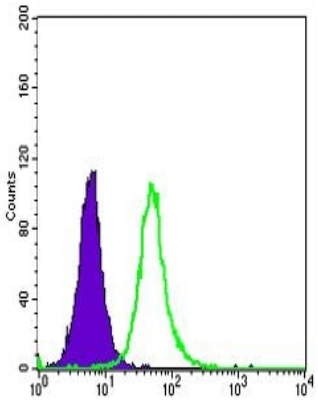
OTX2 Antibody (MA5-15854) in ICC/IF

Immunofluorescence analysis of HepG2 cells using OTX2 monoclonal antibody (Product # MA5-15854) (Green). Red: actin filaments have been labeled with phalloidin.



OTX2 Antibody (MA5-15854) in WB

Western blot analysis of OTX2 using a OTX2 monoclonal antibody (Product # MA5-15854) against a human OTX2 (AA: 40-297) recombinant protein.



OTX2 Antibody (MA5-15854) in Flow

Flow cytometric analysis of HepG2 cells using OTX2 monoclonal antibody (Product # MA5-15854) (green) and negative control (purple).

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PubMed References For OTX2 Monoclonal Antibody (1H12C4B5)

2 Immunohistochemistry References

Species / Dilution	Summary
Human / 1:200	MA5-15854 was used in Immunohistochemistry to identify both neural stem cell (NSC) proliferation and neuronal maturation abnormalities in NF1-TGD hCOs.
	Cell reports (2021; 36:) **"Patient-derived iPSC-cerebral organoid modeling of the 17q11.2 microdeletion syndrome establishes CRLF3 as a critical regulator of neurogenesis."** Author(s):Wegscheid ML,Anastasaki C,Hartigan KA,Cobb OM,Papke JB,Traber JN,Morris SM,Gutmann DH PubMed Article URL:http://dx.doi.org/10.1016/j.celrep.2021.109315
Mouse / 1:200	MA5-15854 was used in Immunohistochemistry to show that retinal inputs signal through astrocytes to direct the long-range recruitment of interneurons into the visual thalamus.
	Proceedings of the National Academy of Sciences of the United States of America (2020; 117: 2671) **"Retinal inputs signal astrocytes to recruit interneurons into visual thalamus."** Author(s):Su J,Charalambakis NE,Sabbagh U,Somaiya RD,Monavarfeshani A,Guido W,Fox MA PubMed Article URL:http://dx.doi.org/10.1073/pnas.1913053117

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